

What is claimed is:

1. A power source for a disk drive to handle an Emergency Power Off event that comprises:
 - a storage capacitor;
 - 5 a voltage source that outputs a first voltage that is applied as input to the storage capacitor;
 - a tester, responsive to the first voltage and a reference voltage; and
 - an adjustable voltage source, responsive to the tester output, that outputs a second voltage that is applied as input to the storage capacitor.
- 10 2. The power source of claim 1 wherein a sum of the first voltage and the second voltage is substantially constant.
3. The power source of claim 1 which further comprises a voltage reference that outputs the reference voltage.
4. The power source of claim 2 wherein the constant is close to, but
15 below, a maximum allowed operating voltage of the storage capacitor.
5. The power source of claim 1 which further comprises a switching mechanism; wherein the switching mechanism connects a voice coil actuator of the disk drive to a voice coil driver of the disk drive or the storage capacitor.
6. The power source of claim 5 wherein the switching mechanism
20 comprises a switch control and a switch, and wherein the switch control causes the switch to connect the voice coil actuator to the storage capacitor upon detection of an Emergency Power Off event.
7. The power source of claim 5 which further comprises a supplemental capacitor that supplies power to the switching mechanism upon occurrence
25 of an Emergency Power Off event, wherein the first voltage is applied as input to the supplemental capacitor.
8. The power source of claim 1 wherein the tester output comprises a measure of a difference between the first voltage and the reference voltage.
9. A power source for a disk drive to handle an Emergency Power Off
30 event that comprises:
 - a storage capacitor;

a voltage source that outputs a first voltage that is applied as input to the storage capacitor;

a voltage reference that outputs a reference voltage;

a tester, responsive to the first voltage and the reference voltage;

5 an adjustable voltage source, responsive to the tester output, that outputs a second voltage that is applied as input to the storage capacitor;

a switch that connects a voice coil actuator of the disk drive to a voice coil driver of the disk drive or the storage capacitor;

10 wherein the tester output is a measure of a difference between the first voltage and the reference voltage.

10. The power source of claim 9 wherein a sum of the first voltage and the second voltage is substantially constant.